

MULTIMEDIA



UNIVERSITY

STUDENT ID NO

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MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2019/2020

BJA2014 – JAVA PROGRAMMING INTERMEDIATE
(All sections / Groups)

15 OCTOBER 2019
9.00 A.M. - 11.00 A.M.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of 2 pages excluding cover page.
2. There are 4 questions. Answer ALL questions.
3. Please write all your answers in the Answer Booklet provided.

Question 1

You work as a software developer in Multimedia University. You are asked to design an application that can enable the Information Technology workers to check the duration time given to complete each project. Write an application that

- a. Stores at least FIVE (5) different projects and time duration in a two-dimensional array. Sample projects with time duration is given.

Project	Time duration
Camsys System	15 months
MMLS System	12 months
RRS System	9 months
GROW System	10 months
GEMS System	8 months

(10 Marks)

- b. Enable user to enter the project name (such as "MMLS System") using input dialog.
(3 Marks)

- c. Display the corresponding time duration using message dialog.
(10 Marks)

- d. If the project does not exist, display an error message using message dialog.
(2 Marks)

(Total 25 Marks)

Question 2

You are working in human resource department in Al Rajhi Bank. You are asked to design a java application that declare and store employee's details such as employeeID number, name, and salary. Write an application that

- a. Create an abstract **Employee** class for Al Rajhi Bank. The class contains fields for employeeID number, name, and salary. Include a constructor that requires parameters for the employeeID number and name. Include get and set methods for each field; the **setSalary()** method is abstract.
(5 marks)

- b. Create three **Employee** subclasses named **FulltimeEmployee**, **ParttimeEmployee**, and **ContractEmployee**, each with a unique **setSalary()** method. Salary for a **FulltimeEmployee** is \$7,000 per month, salary for a **ParttimeEmployee** is \$3,000 per month, and salary for a **ContractEmployee** is \$5,000 per month.
(9 marks)

- c. Creates an array of at least SIX (6) objects to demonstrate how the methods work for objects for each **Employee** type.
(11 Marks)

(Total 25 Marks)

Continue...

Question 3

Obesity is one of the major problems among adolescents in Malaysia. You as a counsellor at a school was asked to create awareness of healthy lifestyle among the school students by creating motivational posters along the pathway. You will need to

- a. Create a java application with a **JFrame** and at least FIVE (5) labels that contain motivational quotes leading to healthy lifestyle. Sample of motivational quotes is given.

Label
The greatest wealth is health.
A good laugh and a long sleep are the best cures in the doctor's book.
Prevention is better than cure.
The reason I exercise is for the quality of life I enjoy.
The groundwork for all happiness is good health.

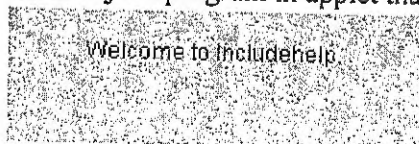
(7 Marks)

- b. The **JFrame** initialized by first label. (7 Marks)
- c. Every time the user clicks a **JButton**, remove previous label and add next label. (10 Marks)
- d. When the user clicked the fifth time, the label will start from first label again. (1 Mark)

(Total 25 Marks)

Question 4

- a) What is an Applet? (3 Marks)
- b) Explain the life cycle of an Applet. (4 Marks)
- c) What happens when an applet is loaded? (3 Marks)
- d) What is the difference between an Applet and a Java Application? (4 Marks)
- e) What are the restrictions imposed on Java applets? Explain any **THREE (3)**. (6 Marks)
- f) Write a java program in applet that will print an output as the screenshot below.



(5 Marks)

(Total 25 Marks)

End of Page